



FEDERAL ENERGY TECHNOLOGY CENTER

**1997 COAL LIQUEFACTION & SOLID FUELS
CONTRACTORS REVIEW CONFERENCE**

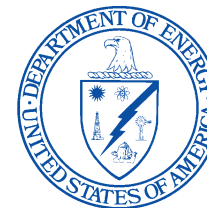
**September 3-4, 1997
Pittsburgh, Pennsylvania**



**U.S. DEPARTMENT OF ENERGY
FEDERAL ENERGY TECHNOLOGY CENTER**

Center for Conference Management
P.O. Box 18209
Pittsburgh, PA 15236





FEDERAL ENERGY TECHNOLOGY CENTER

We Solve National Energy and Environmental Problems

The Federal Energy Technology Center (FETC) is one of the U.S. Department of Energy's major field organizations managing and implementing a broad spectrum of energy and environmental programs for the Department. FETC employs approximately 1,100 federal and support-service contractor employees in Morgantown, West Virginia, and Pittsburgh, Pennsylvania, and is the largest fossil energy research organization in the world.

FETC's mission is to solve national energy and environmental problems. FETC's portfolio includes nearly 600 research, development, and demonstration projects located across the United States. It also conducts in-house research programs that support external projects and identifies new areas of research. FETC manages the nation's fossil energy research and development programs for coal and natural gas, and is developing technologies that will enable the use of the nation's fossil energy resources more cleanly and efficiently. FETC also oversees a major program to develop advanced technology to clean up the inventory of DOE nuclear sites and manage DOE-generated waste faster, cheaper and more safely than current environmental cleanup technologies.

FETC's research, development, and demonstration projects span four major program areas: Coal and Gas Power Systems; Advanced Clean Fuels Research; Natural Gas Supply, Processing, and Storage; and Environmental and Waste Management. These diverse programs are implemented internally at FETC; at Department of Energy national laboratories and academic institutions; and through contracts and assistance programs with the private sector.

COAL LIQUEFACTION AND SOLID FUELS '97 CONFERENCE

The Coal Liquefaction and Solid Fuels '97 conference will be sponsored for the first time by the Federal Energy Technology Center (FETC), a consolidation of the Pittsburgh and Morgantown Energy Technology Centers. The conference provides a forum for energy executives, engineers, scientists, government regulators, and other interested parties to:

- Ascertain the latest results of FETC-sponsored research and development projects related to coal-derived transportation fuels and solid fuels
- Learn about Cooperative Research and Development Agreement (CRADA) opportunities between industry and government from FETC engineers and scientists, and
- Discuss the direction of future research and development for a competitive energy market in the coming millennia.

One of FETC's primary goals is to support industrial development of essential technology needed for private sector commercialization of cost competitive and environmentally superior transportation fuels and solid fuels. During this conference, FETC Director Rita A. Bajura will present a strategic perspective of FETC's key role in DOE as an organization that solves energy and environmental problems, such as the need to provide clean, economic fuels for utilization in the power and transportation industries.

The conference features two days of oral presentations detailing ongoing research projects. Industrial and academic researchers and developers, along with FETC scientists and engineers, will present results from research and development activities related to the:

- development of technologies for the production of environmentally acceptable solid fuels, including coal/biomass/waste mixes,

- enhancement of resources via advanced coal fines recovery,
- development of technologies for the pre-combustion control of hazardous air pollutant precursors,
- development of technologies for the advanced direct liquefaction of coal,
- development of coal/heavy oil and coal/waste mixture technologies,
- production of transportation fuels and high value chemicals from coal-derived synthesis gas,
- development of iron Fischer-Tropsch catalysts, and
- characterization and modeling of the hydrodynamics of slurry bubble column reactors.

This year workshops will be held during the conference to discuss DOE's strategy for a Pioneer Plant, Vision 21, and the Solid Fuels and Feedstocks Program. The workshops will explore the need for partnering within government and between government and industry to promote the introduction of synthetic fuel production in the United States and to develop viable program initiatives in the expanding area of solid fuels feedstocks.

The Coal Liquefaction and Solid Fuels Contractors' Conference is a combined review meeting of federally sponsored research and development of the Pittsburgh and Morgantown sites of FETC. The conference is an open meeting dedicated to information and technology exchange with private industry, academia, National Laboratories, and other members of the public as well as state and federal agencies.

1997 COAL LIQUEFACTION & SOLID FUELS
CONTRACTORS REVIEW CONFERENCE

A G E N D A

Tuesday	September 2, 1997		
6:00 – 7:30 pm	Registration		
Wednesday	September 3, 1997		
7:30 – 8:30 am	Registration/Coffee & Danish		
	PLENARY SESSION		
	<i>Session Chairs:</i> Richard Tischler and Carl Maronde		
8:30 – 8:40 am	Welcome/Opening Remarks William Lawson, <i>Director, Fuels Resources Division, Office of Project Management, U.S. Department of Energy, Federal Energy Technology Center</i>		
8:40 – 9:15 am	The Strategic Perspective: FETC’s Key Role in DOE for Ensuring the Availability of Clean, Economic Fuels for Utilization in the Power and Transportation Industries Rita Bajura, <i>Director, U.S. Department of Energy, Federal Energy Technology Center</i>		
9:15 – 9:45 am	The Industrial Perspective John Wootten, <i>Vice President - Technology & Environment, Peabody Holding Co., Inc.</i>		
9:45 – 10:05 am	Overview of Headquarters’ Coal Fuels and Industrial Systems Program C. Lowell Miller, <i>Director, Office of Coal Fuels and Industrial Systems, U.S. Department of Energy</i>		
10:05 – 10:40 am	Overview of FETC’s Solid Fuel and Coal Liquefaction Activities William Lawson, <i>Director, Fuels Resources Division, Office of Project Management, U.S. Department of Energy, Federal Energy Technology Center</i>		
10:40 am	BREAK		
	CONCURRENT SESSIONS		
Wednesday	September 3, 1997		
SESSION	A: SOLID FUELS & FEEDSTOCKS <i>International Technology Transfer</i> <i>Session Chair:</i> Richard Hucko	B: DIRECT LIQUEFACTION/ ADVANCED RESEARCH <i>Session Chair:</i> Michael Baird	C: INDIRECT LIQUEFACTION <i>Session Chair:</i> Richard Tischler
11:00 – 11:30 am	Low-Smoke Fuels Mark Freeman, <i>U.S. Department of Energy, Federal Energy Technology Center</i>	So You Think You Are Going to Put Your Coal-Derived Liquids in My Refinery Howard Moore, <i>Asbland Oil Company</i>	A Novel Configuration for Coproducing Fischer-Tropsch Fuels and Electric Power from Coal and Natural Gas David Gray and Glen Tomlinson, <i>Mitretek</i>
11:30 – 12:00 pm	The Future of Coal Preparation in India Gary Staats, <i>U.S. Department of Energy, Federal Energy Technology Center</i>	Catalyst Testing of Highly-Dispersed Metal Nanoparticles for Coal Liquefaction and Coal/Waste Coprocessing Anthony Martino, <i>Sandia National Laboratories</i>	Fuel Requirements for Advanced Heavy Diesel Engines James Eberhardt, <i>Office of Heavy Vehicles Technologies, U.S. Department of Energy</i>
12:00 – 1:30 pm	LUNCH	LUNCH	LUNCH
	Hazardous Air Pollutant Precursor Control <i>Session Chair:</i> Michael Nowak		<i>Session Chair:</i> Ram Srivastava
1:30 – 2:00 pm	Precombustion Removal of Hazardous Air Pollutant Precursors David Akers, <i>CQ Inc.</i>	Feasibility Study for a Demonstration Plant for Liquefaction and Coprocessing of Waste Polymers Gerald Huffman, <i>CFFLS, University of Kentucky</i>	The Gas to Liquids: An Overview Venkat K. Venkataraman, <i>U.S. Department of Energy, Federal Energy Technology Center</i>
2:00 – 2:30 pm	Precombustion Control of Hazardous Air Pollutant Precursors Gerald Luttrell, <i>Virginia Polytechnic Institute & State University</i>	Catalytic Liquefaction of Waste Plastics Larry Anderson, <i>University of Utah</i>	Fischer-Tropsch Run III at the LaPorte Alternate Fuels Development Unit Bharat L. Bhatt, <i>Air Products and Chemicals, Inc.</i>
2:30 – 3:00 pm	Biochemical Removal of Hazardous Air Pollutant Precursors from Coal Greg Olson, <i>Little Bear Laboratories</i>	Studies in Catalytic Hydroprocessing for Upgrading Coal and Waste-Derived Liquids to Clean Transportation Fuels James Guin, <i>Auburn University</i>	Technology Development for Iron Fischer-Tropsch Catalysts Burtron H. Davis, <i>Center for Applied Energy Research, University of Kentucky</i>

CONCURRENT SESSIONS

Wednesday	September 3, 1997		
SESSION	A: SOLID FUELS & FEEDSTOCKS	B: DIRECT LIQUEFACTION/ ADVANCED RESEARCH	C: INDIRECT LIQUEFACTION
3:00 – 3:15 pm	BREAK	BREAK	BREAK
	<i>Clean Coal Technology and Major Projects</i> <i>Session Chair:</i> Joseph Renk		
3:15 – 3:45 pm	ENCOAL Mild Coal Gasification Project Brent Knottnerus, <i>ENCOAL Corp.</i>	Studies on Dispersed MoS2 Catalyst for Coal Liquefaction Bradley Bockrath, <i>U.S. Department of Energy,</i> <i>Federal Energy Technology Center</i>	The Effects of Slurry Composition on the Reaction Rate of the Fischer-Tropsch Synthesis John J. Marano, <i>Burns and Roe Services Corp.</i> and Robert J. Gormley, <i>U.S. Department of Energy,</i> <i>Federal Energy Technology Center</i>
3:45 – 4:15 pm	Advanced Coal Conversion Process Demonstration Ray Sheldon, <i>Rosebud Syncoal Partnership</i>	Coprocessing Studies in the FETC Office of Science & Technology Kurt Rothenberger, <i>U.S. Department of Energy,</i> <i>Federal Energy Technology Center</i>	Characterization of Iron-Based Fischer-Tropsch Catalysts Abhaya Datye, <i>University of New Mexico</i>
4:15 pm	Premium Fuel Development Mahesh Jha, <i>Cyprus-Amax Coal Company</i>	Recent Developments in Coal Liquefaction and Coprocessing at FETC In-House Anthony Cugini, <i>U.S. Department of Energy,</i> <i>Federal Energy Technology Center</i>	Estimation of Surface Site Density on Iron Fischer-Tropsch Catalysts by Means of a Test Reaction Mark McDonald, <i>U.S. Department of Energy,</i> <i>Federal Energy Technology Center</i>
4:45 pm	ADJOURN	ADJOURN	ADJOURN
Thursday	September 4, 1997		
SESSION	A: SOLID FUELS & FEEDSTOCKS	B: DIRECT LIQUEFACTION/ ADVANCED RESEARCH	C: INDIRECT LIQUEFACTION
	<i>New Applications</i> <i>Session Chair:</i> Arthur Baldwin	<i>Session Chair:</i> Michael Nowak	<i>Session Chair:</i> Michael Zarochak
8:30 – 9:00 am	The Biomass Power Program Helena Chum, (invited) <i>The National Renewable Energy Laboratory</i>	Direct Liquefaction Program John Winslow, <i>U.S. Department of Energy,</i> <i>Federal Energy Technology Center</i>	Some Advances in Catalysis for Alternate Fuels Bharat L. Bhatt, <i>Air Products and Chemicals, Inc.</i>
9:00 – 9:30 am	Coal Fines – Resource of The Future Clark Harrison, <i>CQ Inc.</i>	GelCat Catalyst in Direct Liquefaction TBD, <i>Hydrocarbon Technologies, Inc.</i>	Catalyst Development for Isobutanol Synthesis Enrique Iglesia, <i>University of California–Berkeley</i>
9:30 – 10:00 am	GranuFlow Process Development George Wen, <i>U.S. Department of Energy,</i> <i>Federal Energy Technology Center</i>	Use of Dispersed Catalyst to Coprocess New Mexico Subbituminous Coal with Hondo Vacuum Bottoms Theo Lee, <i>Hydrocarbon Technologies, Inc.</i>	Production of Middle Distillates Charles E. Taylor, <i>U.S. Department of Energy,</i> <i>Federal Energy Technology Center</i>
10:00 – 10:15 am	BREAK	BREAK	BREAK
	<i>Utility Support Applications</i> <i>Session Chair:</i> Richard Killmeyer		
10:15 – 10:45 am	Upgraded Coal Interest Group Howard Lebowitz, <i>Fossil Fuel Sciences</i>	Advanced Liquefaction Process Concepts Edwin Givens, <i>Center for Applied Energy & Research,</i> <i>University of Kentucky</i>	Synthesis of Vinyl Acetate Monomer from Synthesis Gas Joseph R. Zoeller, <i>Eastman Chemical Company</i> <i>Research Laboratories</i>
10:45 – 11:15 am	Electrostatic Process Development and Fundamentals of Electrostatic Separation Dennis Finseth, <i>U.S. Department of Energy,</i> <i>Federal Energy Technology Center</i>	Characterization of Process Samples from Co-Liquefaction of Coal and Waste Polymers Gary Robbins, <i>CONSOL, Inc.</i>	Synthesis of Methyl Methacrylate from Coal-Derived Syngas James J. Spivey, <i>Research Triangle Institute</i>
11:15 – 11:45 am	MagMill Development Robin Oder, <i>EXPORTech Co. Inc</i>	The Reactivity of Direct Liquefaction Distillation Resids Susan Brandes, <i>CONSOL, Inc.</i>	Progress in Understanding the Fluid Dynamics of Bubble Column Reactors - I Milorad P. Dudukovic, <i>Washington University</i>
11:45 – 1:30 pm	LUNCH	LUNCH	LUNCH
	<i>High-Efficiency Preparation</i> <i>Session Chair:</i> Carl Maronde		
1:30 – 2:00 pm	Development, Testing, and Demonstration of an Optimal Fine-Coal Cleaning Circuit Steve Hadley, <i>Praxis Engineers, Inc.</i>	Characterization of All-Slurry Mode Liquefaction Products Peizheng Zhou, <i>Burns and Roe Services Corp.</i> and Richard Winschel, <i>CONSOL, Inc.</i>	<i>Session Chair:</i> Richard Tischer Progress in Understanding the Fluid Dynamics of Bubble Column Reactors - II L. S. Fan, <i>Ohio State University</i>

CONCURRENT SESSIONS

Thursday	September 4, 1997		
SESSION	A: SOLID FUELS & FEEDSTOCKS	B: DIRECT LIQUEFACTION/ ADVANCED RESEARCH	C: INDIRECT LIQUEFACTION
2:00 – 2:30 pm	POC-Scale Testing of a Dry Triboelectrostatic Separator for Fine Coal Cleaning Roe-Hoan Yoon, <i>Virginia Polytechnic Institute & State University</i>	Refining and End Use Study of Coal Liquids (I) Cliff Lowe, <i>Bechtel Corporation</i>	Experimental Characterization of Slurry-Phase Bubble Column Reactor Hydrodynamics Nancy B. Jackson, <i>Sandia National Laboratories</i>
2:30 – 3:00 pm	Advanced Control System for Fine Coal Flotation Greg Adel, <i>Virginia Polytechnic Institute & State University</i>	Refining and End Use Study of Coal Liquids (II) Jimell Erwin, <i>Southwest Research Institute</i>	Progress in Development of Ultrasonic Probe Technique for Hydrodynamic Characterization Yee Soong, <i>U.S. Department of Energy, Federal Energy Technology Center</i>
3:00 – 3:15 pm	BREAK	BREAK	ADJOURN
3:15 – 3:45 pm	POC-Scale Testing of an Advanced Fine Coal Dewatering Equipment/Technique Jack Groppo, <i>University of Kentucky</i>	Overview of Catalyst Testing and Coprocessing Studies at Sandia Frances Stohl, <i>Sandia National Laboratories</i>	
3:45 – 4:15 pm	POC-Testing of Oil Agglomeration Techniques and Equipment for Recovery and Cleaning of Fine Coal from Fine Coal Processing Streams Les Ignasiak, <i>Alberta Research Council</i>	Integration Opportunities for Coal/Oil Coprocessing with Existing Petroleum Refineries David Gray, <i>Mitrotek</i>	
4:15 pm	ADJOURN	Production and Screening of Carbon Product Precursors from Coal John Zondlo, <i>West Virginia University</i>	
4:45 pm		ADJOURN	

Registration

There will be a \$20.00 Registration Fee to cover the cost of breaks. Registration fees will not be refunded after August 22, 1997.

Lunches will be on your own.

Checks should be made payable to the Center for Conference Management and accompany your Registration Form.

If paying by credit card, you can fax your registration to: (412) 892-4160 or register by phone on the following toll-free numbers: 800-441-9927 (outside Pennsylvania) or 800-441-0875 (in Pennsylvania).

Hotel Information

Reservations must be made by calling the hotel directly at (412) 391-4600. The Department of Energy has reserved a block of rooms at a special rate of \$83.00 single and \$103.00 for a double room, plus 12% tax. Please be sure to ask for this room block when making your reservations.

RESERVATIONS MUST BE MADE BY AUGUST 8, 1997.

After this date, rooms at the group rate will be based upon availability. In order to confirm a room reservation, the hotel requires a first night's pre-payment.

Government attendees must pay with a government credit card to be tax exempt.

Check-in time is 3:00 pm.
Check-out time is 12:00 pm.

Transportation

Transportation between the Pittsburgh International Airport and the Hilton Hotel is available by Airline Transportation Company. The boarding area at the airport is located on the lower level near the U.S. Airways baggage claim area. Transportation service run every 30 minutes to and from the airport. The cost is \$12.00 one way or \$20.00 round trip.

If you require further information they can be reached at (412) 471-2250 or (412) 471-8900.

**For updates and information about upcoming conferences and workshops,
visit the Federal Energy Technology Center on the Internet at:**

<http://www.fetc.doe.gov>
Select "Events"

Directions to the Pittsburgh Hilton Hotel

FROM PITTSBURGH INTERNATIONAL AIRPORT

Follow 60 South signs to 22/30 East and then to 279 North. Take 279 North through the Fort Pitt Tunnel and over the Fort Pitt Bridge to Exit #9 Liberty Avenue. At the first light, make a left onto Commonwealth Place. The Hilton is on the right.

FROM OAKLAND

Follow Fifth Avenue and stay in the second lane from the left. Go through approximately 8 lights and make a left onto Craft Avenue. At the first light, make a right onto Forbes Avenue. Follow signs for downtown. Road will yield onto 376 West. Exit #2 Stanwix Street (left hand exit). At the first light, make a left onto Fort Pitt Blvd. Make the first right onto Commonwealth Place. The Hilton is on the right.

FROM THE EAST

PA Turnpike (I-76 West) to Exit #6 Monroeville-Pittsburgh onto Parkway 376 West. Exit 376 at #2 Stanwix Street (left-hand exit). At light, make a left onto Fort Pitt Blvd. Take the first right onto Commonwealth Place. The Hilton is on the right.

FROM THE WEST

PA Turnpike (I-76 East) to Exit #3 onto Route 79 South to I-79 South. I-79 merges into 279 South. Follow 279 South signs for Airport/Fort Pitt Bridge. Follow this sign through the Fort Pitt Tunnel and over the Fort Pitt Bridge to Exit #9 Liberty Avenue. At the first light, make a left onto Commonwealth Place. The Hilton is on the right.



FROM THE NORTH

I-79 South merges into 279 South. Follow 279 South signs for Airport/Fort Pitt Bridge. Follow this sign over the Fort Duquesne Bridge and take the Fort Duquesne Blvd. ramp. At the first light turn right onto Stanwix Street. At the second light, make a right onto Liberty Avenue. At the next light, make a right onto Commonwealth Place. The Hilton is on the right.

FROM THE SOUTH

Take 279 North through the Fort Pitt Tunnel and over the Fort Pitt Bridge to Exit #9 Liberty Avenue. At the first light, make a left onto Commonwealth Place. The Hilton is on the right.



1997 COAL LIQUEFACTION & SOLID FUELS CONTRACTORS REVIEW CONFERENCE

September 3-4, 1997

The Pittsburgh Hilton & Towers
Pittsburgh, Pennsylvania

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Registration Fee: \$20.00 (to cover the cost of breaks)

Lunches will be on your own.

Conference fees will not be refunded after August 22, 1997.

Please make check payable to the **Center for Conference Management**
and enclosed with your registration form, mail to:

Center for Conference Management
P.O. Box 18209, MS 922/178C
Pittsburgh, PA 15236

Registration Deadline: August 22, 1997

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